



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,993	07/13/2006	Hiromi Yokota	1823-0130PUS1	8867
2292 7590 02/03/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
FOGARTY, CAITLIN ANNE				
ART UNIT		PAPER NUMBER		
1793				
NOTIFICATION DATE		DELIVERY MODE		
02/03/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/585,993

Applicant(s)

YOKOTA ET AL.

Examiner

CAITLIN FOGARTY

Art Unit

1793

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Status of Claims

1. Claims 1 – 6 are pending where claim 5 has been amended and claim 6 is new.

Status of Previous Rejections

2. The 35 U.S.C. 112 second paragraph rejection of claim 5 is withdrawn in view of the amended claims filed October 30, 2008.

The 35 U.S.C. 103(a) rejection of claims 1 – 5 as being unpatentable over GB 2 355 016 A is maintained.

The provisional nonstatutory obviousness-type double patenting rejection of claims 1 – 5 as being unpatentable over claims 1 - 4 of copending Application No. 11/148,186 is maintained.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2 355 016 A from the IDS (hereinafter GB '016).

GB '016 is applied to instant claims 1 – 5 as set forth in the June 30, 2008 Office action. The amended feature of claim 5 did not change the scope of the claim and therefore the original rejection of claim 5 is maintained.

With respect to the new claim 6, p. 7 line 19-p. 8 line 14 of GB '016 discloses that the hard matter particles may be an Fe compound such as an Fe-B system. Therefore,

it would have been obvious to one of ordinary skill in the art to select either FeB, Fe₂B, or Fe₃B as the Fe compound since they are all Fe-B systems.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 – 6 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over the amended claims 1 and 3 – 5 of copending Application No. 11/148,186 filed November 19, 2008 for the reasons set forth in the June 30, 2008 Office action.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

7. Applicant's arguments filed October 30, 2008 have been fully considered but they are not persuasive.

Arguments are summarized as follows:

- a. As can be seen in Fig. 2 of GB '016, the skilled artisan would clearly be directed to employ Bi phase particles which are larger than the hard particles, since the Bi phase particle surrounds the hard particle in the cross sectional view of the two particles in the copper alloy matrix. Also, as can be seen in p. 5 lines 11-16 of GB '016 one of ordinary skill in the art would be motivated to use Bi-phase particles which are larger than the hard particles since the use of smaller Bi-phase particles prevent the cushioning of the hard particles, thereby allowing them to attack the mating member.
- b. In the rejection of claim 4, the rejection relies on an inherency argument to reject the limitation that the hard particles have 50% or less of a contact length ratio with the Bi phase based on the total circumferential length of the hard particle, which is in contact with the Bi phase, are present in a ratio of 70% or more based on the entire number of hard particles. However, the sintering process of GB '016 occurred over the course of 20 min. (p. 9 lines 24-27) which is longer than the sintering process of the invention. Therefore, the sintered alloy of GB '016 was not made by a similar method to what was used by Applicants in preparing the sintered alloy of the invention.

Examiner's responses are as follows:

- a. – b. The Examiner maintains the position that the Pb-free copper based sintered alloy of GB '016 has a Bi phase with a smaller average particle diameter than that of the hard particles that is dispersed in the Cu matrix. This is

supported by p. 7 lines 5-19 of GB '016 which disclose that the Bi, Sn, and Cu powders have a grain size of *not more than* 250 μm and the hard particles have an average grain size of 1 to 45 μm . Therefore, the Bi phase may have a smaller grain size than that of the hard particles since there is no minimum on the grain size limitation of the Bi phase. Furthermore, the Examiner disagrees that Fig. 2 of GB '016 would lead one skilled in the art to conclude that the Bi phase particles are larger than the hard particles because p. 3 line 23-p. 4 line 2 of GB '016 merely discloses that Fig. 2 shows the cushioning property of the soft Bi-phase. Furthermore, p. 5 lines 11-16 of GB '016 discussed by Applicant would not lead one of ordinary skill in the art to conclude that the Bi phase has a larger average particle diameter than that of the hard particles and does not place a limitation on the size of the Bi phase particle diameters. Rather, GB '016 teaches the limitation that the average particle diameter of the hard particles may not exceed 45 μm because they would no longer be able to properly embed in the Bi phase. In addition Applicant has not shown the criticality of the limitation that the Bi phase has a smaller average particle diameter than that of the hard particles.

The Examiner's position is further supported by [0017] of Applicant's own specification which states that the Cu-Bi pre-alloy powder has a particle diameter of 150 μm or less (which is larger than that of the hard particles) *before* preliminary sintering is carried out and that after sintering, the diameter corresponding to a circle of Bi phase has a size ranging from 5-28 μm as seen in Table 1. Therefore, it would be expected that the Bi, Sn, and Cu powders of GB

'016 that have a grain size of not more than 250 μ m before sintering (p. 9 lines 5-19), would have a diameter corresponding to a circle of Bi phase and contact length ratio with the Bi phase based on the total circumferential length of the hard particle after sintering similar to that of the instant invention since the alloy of GB '016 has an overlapping composition and is made using a similar method (p. 9 line 5-p. 10 line 6) as the alloy of the present invention.

Applicant argued that the method of making the sintered alloy of GB '016 is not similar to the method used in instant application since the sintering process of GB '016 was carried out over a longer period of time. However, Applicant has not submitted factual evidence to support this argument. Therefore, the Examiner maintains the position that since the alloy of GB '016 has an overlapping composition and is made using a method similar to that of the instant invention, including sintering at a temperature range that overlaps with the range of the instant invention, it would be expected that the alloy of GB '016 would have an overlapping Bi phase average particle diameter, contact length ratio, and hard matter particle ratio.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Art Unit: 1793

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

CF